

IN THE CLAIMS:

1. - 31. *cancelled*

32. (*original*) A method for processing a session in a packet-processing system, the session having a session rate, the method comprising the steps of:

determining whether the session rate matches one of a plurality of basic rates, which each basic rate associated with a respective one of a plurality of rate-specific queues; and

splitting the session, in response to a non-match of the session rate with any of the basic rates, into subsessions for queuing into at least one of the rate-specific queues.

33. (*original*) The method of claim 32 further comprising the step of:

queuing the session in an unsplit state, in response to a match of the session rate with any of the basic rates, into a corresponding rate-specific queue having the matching basic rate.

34. (*original*) The method of claim 32, wherein the step of splitting includes the step of splitting the session into subsessions wherein every subsession has an identical subsession rate.

35. (*original*) The method of claim 34, wherein the subsession rate matches at least one of the plurality of basic rates.

36. (*original*) The method of claim 35, further comprising the step of:

queuing the subsessions into a corresponding rate-specific queue having an associated basic rate matching the subsession rate.

37. (*original*) The method of claim 32, wherein the steps of determining and splitting are performed by a queue controller.

38. (original) The method of claim 32, further comprising the step of:
processing the session and subsessions using a per-connection-timestamp
procedure.

39. (original) The method of claim 32, further comprising the step of:
processing the session and subsessions using a no-per-connection-timestamp
procedure.

40. (original) The method of claim 32, wherein the rate-specific queues are rate
first-in-first-out (FIFO) queues.

41. - 51. *cancelled*